USAF Scientific Advisory Board 2001 Summer Study

Availability and Survivability of Militarily Relevant Commercial Space Systems

Terms of Reference

BACKGROUND

Military operations are increasingly dependent on space-based assets for threat warning, surveillance, reconnaissance, and communications. The DoD has also become increasingly dependent on commercial systems as a major augmentation of military space systems. This has been most evident with commercial satellite communications and, more recently, commercial imagery and radar products. Recent DSB and SAB studies have addressed the survivability of military space assets but have not provided a satisfactory strategy for assuring the availability of commercial services.

STUDY PRODUCTS

Briefing to SAF/OS & AF/CC in October 2001. Publish report in December 2001.

CHARTER

The study will accomplish the following tasks:

1. Review current Air Force and other DoD use of and reliance on commercial space systems and project the use and reliance into the next few decades.
2. Assess the consequences to Air Force operations if these commercial systems become unavailable, partially available, or degraded.
3. Determine the availability issues for the applicable commercial systems. Consider
    a. Commercial practices, user priorities, multi-national ownership, etc., and
    b. Vulnerability of all aspects of the systems (space and ground) to deliberate hostile actions.
4. Propose (cost-effective) options or strategies for managing the availability problems cited above.
    a. Include possible changes to Air Force and other government equipment and operations, including procedures and training.
    b. Those that propose changes to a commercial system should assess incentives and cost-sharing possibilities.
    c. Also consider the real time problem of detection and identification of attack or degradation of availability, and possible response options.

The study should build on the recent DSB and SAB studies that addressed the survivability of space systems. It should also recognize that the Air Force's use of space assets is often indirect, through organizations such as DISA and the NRO, and should include them in the study.